American Journal of Physiology: Regulatory, Integrative and Comparative Physiology

VOLUME 34, July-December, 1993

Editor: W. H. DANTZLER

D. C. JACKSON P. R. McHUGH H. RAFF Associate Editors: L. A. FISHER S. H. WRIGHT T. H. MORAN J. E. HALL J. E. ROBILLARD **Editorial Board:** N. GEARY T. H. ADAIR G. L. GEBBER A. P. ROCCHINI J. GIBBS B. J. ROLLS G. A. AHEARN B. D. GOLDMAN J. P. GRANGER R. J. ROMAN J. C. ROMERO J. C. ROSE S. AL-DAMLUJI R. H. ALPER J. G. BAUST P. G. GUYENET N. E. ROWLAND C. BAYLIS D. R. HALM J. R. HAZEL J. O. HILL M. M. SAYEED G. J. SCHWARTZ A. F. BENNETT T. BENNETT A. SCLAFANI A. J. BERGER J. HIMMS-HAGEN A. K. JOHNSON W. H. KARASOV L. SHARE T. J. SHUTTLEWORTH P. C. BIE E. H. BLAINE M. L. BLAIR C. M. BLATTEIS K. D. KEEF H. D. KIM J. B. SIMPSON G. K. SNYDER G. N. SOMERO W. N. STAINSBY M. J. STOCK K. B. STOREY K. A. KIRCHNER M. J. KLUGER U. C. KOPP J. M. KRUEGER R. A. BRACE T. J. BRADLEY M. W. BRANDS E. J. BRAUN E. M. STRICKER A F. SVED C. R. TAYLOR G. TOUGAS P. K. LAUF D. P. BROOKS O. A. CARRETERO B. E. LEVIN T. E. LOHMEIER T. W. CASTONGUAY G. R. LYNCH C. P. MANGUM I. H. CHAUDRY J. R. CLAYBAUGH D. A. VANDERWEELE J. G. VERBALIS R. D. MANNING, JR. J. G. VERBALIS
C. E. WADE
L. C. H. WANG
D. B. WEST
E. P. WIDMAIER
C. W. WILCOX
C. W. WILKINSON
C. E. WOOD
S. C. WOOD
D. B. YOUNG
L. H. ZUCKER H. COLERIDGE M. J. McKINLEY W. K. MILSOM K. A. NAGY A. W. COWLEY, JR. L. I. CRAWSHAW D. N. DARLINGTON G. F. DIBONA H. NISHIMURA W. R. ELLINGTON P. K. T. PANG W. C. ENGELAND D. H. EVANS J. B. PRITCHARD R. D. REIDELBERGER M. R. FEDDE L. P. RENAUD G. D. FINK J. L. RENFRO I. H. ZUCKER D. O. FOSTER R. C. RITTER R. H. FREEMAN

Publications Committee

L. R. JOHNSON, Chair D. L. KUNZE

L. B. ROWELL

J. A. WILLIAMS

L. M. MENDELL

Ex officio

B. B. RAUNER Publications Manager

and Executive Editor

W. H. DANTZLER, President

M. FRANK, Executive

Director

Editorial Staff

L. CHAMBERS

Production Manager

Z. ERIM, JR.

J. COLL

Copy Editors

Published monthly by THE AMERICAN PHYSIOLOGICAL SOCIETY 9650 Rockville Pike, Bethesda, MD 20814-3991 Copyright © 1993 by the American Physiological Society. Printed in the United States of America by Waverly Press, Inc., Baltimore, MD 21202. The code at the bottom of the first page of an article indicates the copyright owner's consent that copies of an article may be made beyond that permitted by sections 107 and 108 of the U.S. Copyright Law—unless the copies are for general distribution, for advertising, for creating new works, or for resale—provided the per-copy fee is paid through the Copyright Clearance Center, Inc., 27 Congress St., Salem, MA 01970.

Guest Referee Editors

The Publications Committee of the American Physiological Society gratefully acknowledges the services of the following guest referee editors who assisted the Editorial Board in the reviews of manuscripts.

W. A. Abbott D. J. Adams S. Akana H. E. Albers W. S. Ammons D. F. Anderson E. Anderson W. J. Arendshorst J. Arrowood P. G. Baer G. J. Bagby S. P. Bagby M. Baggiolini R. S. Balaban K. M. Baldwin N. Ballatori R. O. Banks R. W. Barbee S. M. Barman R. J. Barnard C. C. Barney T. J. Bartness J. Bassingthwaighte A. E. Baue M. J. Baum S. L. Bealer G. K. Beaucamp W. Beierwaltes A. W. Bell D. R. Bell P. D. Bell L. L. Bellinger S. Benyajati D. A. Bereiter R. J. Berger R. N. Bergman K. J. Berkley K. Berridge H.-R. Berthoud C. Beuchat L. Bevan L. Beverly K. W. Bevenbach P. Bickler G. E. Billman N. D. Binder S. Binkley J. M. Bissonnette R. Blair M. P. Blaustein J. Blv A. M. Bode D. Boggs M. C. Bohn M. W. Bonds A. Bonen F. Booth K. Borer B. Borth J. A. Boulant Z. Boulos

J. E. Bourdeau

G. A. Bray P. A. S. Breslin S. L. Britton M. A. Brock F. Bronner G. Brooks V. L. Brooks G. Brown R. R. Brown M. S. Brownfield M. J. Brunner R. M. Bryan R. D. Bunag W. Burggren J. C. Burnett J. M. Burt D. W. Busjia N. F. Butte C. C. Calvert L. A. Campfield H. V. Carey D. E. Carlson S. Carlson D. O. Carpenter G. O. Carrier G. D. Cartee T. M. Casey S. Cassin V. M. Cassone M. Castellini E. M. Chang M. Chapleau C. I. Cheeseman A. D. Cherrington C. Y. Cheung K. E. Clark N. B. Clark J. S. Clegg J. Clements P. S. Clifford P. J. R. Cobbett F. Coceani M. I. Cohen T. G. Coleman C. A. Colton W. E. Conner K. Conrad R. Contreras H. J. Cooke D. V. Coscina J. E. Cox G. L. Craviso J. Crowe T. Cudd J. Cunningham W. Cupples F. R. E. Curry M. F. Dallman S. Daniel J. Dark M. B. Davidson

T. Davidson

D. Davies J. D. Davis M. J. Davis L. Deaton J. DeCastro P. Decoursey J. Delcapio P. W. deLeeuw J. R. Dietz M. DiGirolamo C. A. Dinarello W. R. Dixon G. Dobson G. P. Dohanich J. Dohanics G. L. Dohm L. M. Dolan J. Donald C. M. Donovan W. R. Driedzic A. Dubois S. P. Duckles C. A. Ducsay F. E. Dudek G. Duke N. J. Dun A. J. Dunn J. D. Dunn D. Dzielak T. J. Ebert N. H. Edelman D. Edgar G. Edwards R. M. Edwards B. Egan I. C. Ehrhart A. Eison J. A. Elliot W. C. Engeland A. Epple W. L. Epstein P. Ernsberger M. G. Ervin G. A. Eskes M. D. Evered J. N. Fain F. M. Faraci G. A. Farkas A. P. Farrell J. A. Faulkner H. G. Fein R. B. Felder A. V. Ferguson C. M. Ferrario T. F. Ferris G. Z. Feuerstein J. E. Fewell M. E. Fitzgerald W. W. Fleming M. Fowler R. P. Francesconi M. E. Frank

M. Frazier R. F. Fregosi S. K. Fried M. Friedman P. A. Friedman O. Froehlich C. A. Fuller R. W. Fuller G. Gade C. A. Gaillard K. Gallagher D. S. Gann S. M. Gardiner P. J. Garlick H. Gavras M. Gellai H. Gesser T. Getchell A. Gibbs M. J. Gibson R. J. Gillies L. B. Gladden K. Gleeson T. Gleeson S. Goldsmith D. Goldstein L. Goldstein E. Gomez-Sanchez N. Gonzalez C. J. Gordon D. Gordon P. E. Gottschall J. Graham J. G. Granneman T. S. Gray D. Greenberg J. E. Greenleaf L. Greenwald O. W. Griffith L. J. Grota M. Gunning B. Gupta A. Guyton D. Haberle G. Hageman S. R. Hager C. Hai A. C. Hammond D. A. Hanck S. Hand R. G. Hansford A. Hargens S. B. Harrap L. M. Harrison-Bernard E. Hasser P. Hauschka R. A. Hawkins J. R. Haywood C. M. Heesch D. D. Heistad C. Heller

S. Frankmann

E. J. Henriksen S. Herring R. L. Hester S. Hillman B. Hitzig W. Hodos B. Hoebel A. Hofer J. O. Holloszy E. Homsher S. Hootman P. M. Hopkins B. Horwitz T. H. Hostetter L. B. Hough R. Houpt A. Hudetz M. A. Humphreys C. Iadecola R. Ingermann E. Inscho C. Isales J. L. Ivy H. S. Iwamoto L. Jacobson H. W. Jaeschke E. J. Johns T. Johnson M. G. Johnston D. Jones M. D. Jones D. Jorgenson S. Julius G. Kalev S. P. Kalra J. H. Kaplan D. Kapusta K. Karnaby K. J. Karnaky H. Karten G. Kasperek N. Kasting R. Katholi M. P. Kaufman R. E. Keesey M. Keller-Wood J. W. Kemnitz N. J. Kenney K. Keough A. A. Khraibi R. G. Kilbourn D. L. Kimmel R. King C. Kirby H. R. Kirchheim H. Kissileff S. Kitagawa K. C. Klasing D. C. Klein R. Kline F. G. Knox R. Koehler V. Kon H. Kontos P. H. Koo H. A. Koomans A. Koretsky D. R. Kostreva K. C. Kregel D. Kripke

R. Kronaeuer R. N. Kurl T. W. Kurtz S. Lahiri J. F. Laird C. H. Lang W. Langhans D. P. Latteman M. H. Laughlin L.-Y. Lee S. F. Leibowitz E. Levin A. S. Levine S. Levine J. F. Liard P. Licht R. L. Lieber E. Liechty H. Lillywhite M. D. Lindheimer S. L. Lindstedt A. D. Loewy J. H. Lombard J. B. Long L. Longo J. Lorenz T. Louis A. D. Lowey J. H. Ludens H. Lukaski P. Lutz B. Luxon R. B. Lydic R. Lynch D. Maiid G. Malvin A. L. Mark G. S. Marks R. Marsh L. Marson O. Mathieu-Costello D. Mattson J. T. McCabe D. O. McCarthy D. McCrimmon J. McDonagh J. C. McGiff B. McKersie B. R. McMahon K. McMartin I. F. McMurtry R. Mehiel R. L. Meisel S. T. Meller M. Menaker D. Mendelowitz J. Menlton R. P. Menninger D. Merrill H. Middlekauff S. W. Mifflin K. I. Miller R. E. Miller R. J. Miller V. M. Miller D. E. Millhorn A. Mimran R. Miselis R. Mistlberger

J. Mitchell

K. Mitchell A. J. Moe T. S. Moerland J.-P. Montani T. Moody L. G. Moore H. Morgan J. E. Morley J. I. Morrell M. Morris S. F. Morrison G. Mortimore N. Moss H. J. Motulsky M. J. Mulvaney K. A. Nath P. W. Nathanielz E. D. Nattie R. J. Nelson B. L. Neubauer E. Newsholme G. A. Nickols C. Nicoll E. P. Nord R. Norgren B. Nuwayhid H. Ohta K. Olson M. S. Olson J. J. Oppenheim G. A. Ordway J. R. Ortaldo J. L. Osborn J. W. Osborn J. E. Ottenweller I. G. Otterness A. M. Pajor J. M. Palmer W. Pare J. C. Parker D. Pascual K. P. Patel T. B. Patel J. C. Pelayo D. Pelligrino A. M. Perault-Staub W. H. Percy S. Perry P. B. Persson T. V. Peterson K. D. Philipson S. Pillaresetti Q. J. Pittman C. R. Plata-Salaman D. W. Ploth P. Plotsky D. M. Pollock K. S. Polonsky P. J. Ponganis J. P. Porter F. L. Powell S. K. Powers T. L. Powley N. R. Prabhakar H. Prange R. Preston R. L. Prewitt D. V. Priola E. Q. Quillen J. A. Rall

J. P. Rapp R. F. Rea J. Reckelhoff R. B. Reeves M. B. Reid W. Renehan A. L. Riley J. Robbins H. A. Robertson R. C. Rogers L. Rome D. R. Romsos K. P. Roos G. A. Rosenberg G. Rosenthal M. G. Ross D. A. Roth C. Rothe D. F. Rothe S. M. Rothman N. J. Rothwell L. B. Rowell D. A. Ruggiero B. Rusak B. F. Rush U. S. Rvan B. D. Sachs E. Samols G. Sant'Ambrogio C. P. Saper D. Saphier H. N. Sapru P. E. Sawchenko W. H. Sawyer C. Scanes E. Scharrer A. M. Scher D. A. Scheuer E. L. Schiffrin R. J. Schimmel D. A. Schoeller H. D. Schultz W. J. Schwartz T. R. Scott J. L. Seagard J. Sealey D. R. Seals C. L. Seidel L. C. Senay, Jr. A. A. Seymour N. S. Shargill K. A. Sharkey B. Sharp S. J. Shefchyk Y .- T. Shen G. Shepherd T. G. Sherman M. Shibata T. Sick J. A. Silva M. Silver R. Silver K. J. Simansky R. J. Simmons L. O. Simonsen A.-L. Siren C. D. Sladek N. Smatresk A. Smits

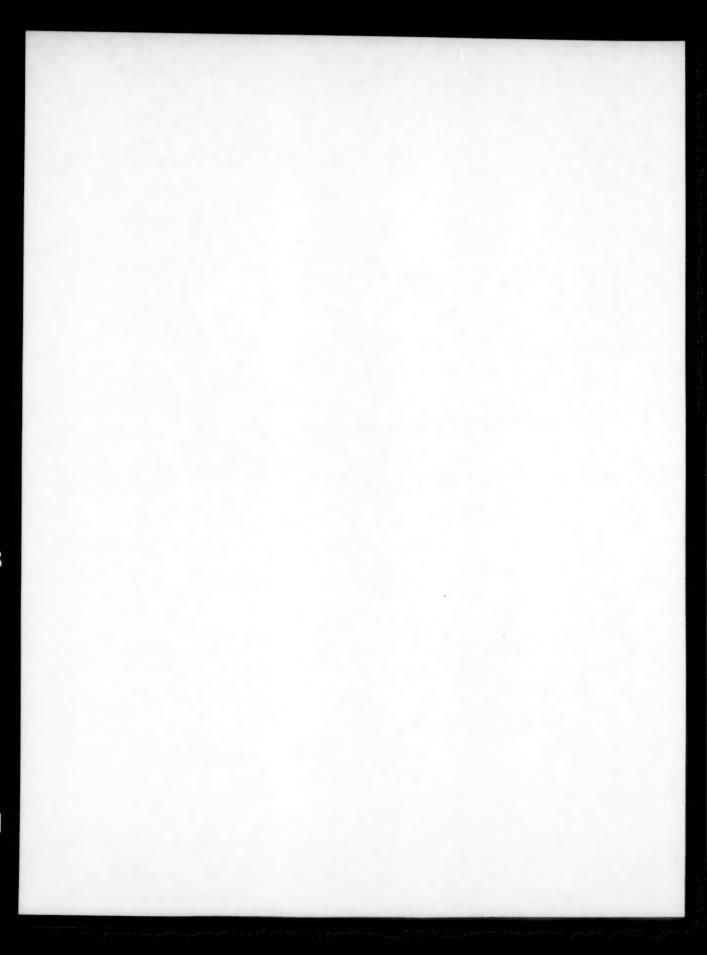
D. Randall

H. Sonnenberg J. Sowers J. Specker A. C. Spector R. Spector D. E. Spiers A. Spitzer H. A. Spurgeon G. B. Stanley W. C. Stanley C. L. Stebbins A. B. Steffens T. P. Stein G. Stephens B. R. Stevens C. E. Stevens D. Stiffler A. Strack K. Strange A. Strohmayer N. Strominger L. P. Sullivan M.-K. Sun H. H. Szeto J. E. Szilagyi

J. Szivek R. S. Szymusiak Y. F. Tache L. K. Takahashi W. T. Talman A. E. Taylor D. Teitel D. L. Tempel M. D. Thames A. B. R. Thomson S. Thomson J. A. Thornhill S. Thornton T. N. Thrasher R. L. Thunhorst M. E. Tischler N. C. Tkacs M. Tordoff D. Towle M. I. Townsley D. L. Traber G. J. Trachte J. Travis R. J. Traystman

J. Triscari R. Y. Tsien J. F. Turrens V. E. Uhley B. Van Vliet S. Vannucci W. L. Veale C. Villar-Palasi D. Villarreal C. Wahlestedt A. Wakade C. D. Walker P. Walsh R. Y. Wang M. P. Warren J. Wasser D. Wasserman S. Watts L. C. Weaver H. P. Weingarten W. J. Welch N. West D. White J. D. White

M. V. Whitehead
S. J. Wickler
R. Wideman
L. Widman
L. Widman
M. F. Wilkinson
J. Willis
D. F. Wilson
W. W. Winder
R. M. Winslow
R. W. Wiseman
C. M. Wood
S. C. Woods
F. Wu
R. D. Wurster
K. A. Yagaloff
A. J. Yool
D. A. York
J. B. Young
V. R. Young
V. R. Young
D. P. Yox
J. Zadunaisky
E. J. Zambraski
M. Zeidel
B. G. Zimmerman



American Journal of Physiology: Regulatory, Integrative and Comparative Physiology

KEY TO CATEGORIES: 1. Comparative Physiology Regulation and Integration in: 2. Autonomic Physiology; 3. Behavior; 4. Cardiovascular Physiology; 5. Endocrinology; 6. Energetics; 7. Fluids and Electrolytes; 8. Functional Morphology; 9. Ingestion; 10. Periodicity; 11. Respiration; 12. Temperature

No. 1. JULY 1993

4.7	PC	0	-

2,4,5	Adrenal medulla as a mediator of diet-induced hypertension L. N. Kaufman, HY. Li, M. M. Peterson, and A. K. Gilardy	R
7,10	Angiotensin-converting enzyme inhibition and Na appetite: microbehavioral analysis and nycthemeral physiology	
4,2	N. E. Rowland, T. M. Nicholson, and J. C. Smith Inhibition of chemoreceptor inputs to nucleus of tractus solitarius neurons during baroreceptor stimulation	R
	S. W. Mifflin	R1
5,9,2	Adrenalectomy of the obese Zucker rat: effects on the feeding response to enterostatin and specific mRNA levels S. Okada, T. Onai, G. Kilroy, D. A. York, and G. A. Bray	R2
2,4,5	Effects of nifedipine and BAY K 8644 on stimulation-induced adrenal catecholamine secretion in the dog	
	R. Gaspo, N. Yamaguchi, and J. de Champlain	R2
2,4	Somatic and visceral inputs to neurons of the rostral ventrolateral medulla R. Ermirio, P. Ruggeri, C. Molinari, and L. C. Weaver	R3
1,6	Response of protein synthesis to anoxia and recovery in anoxia-tolerant hepatocytes S. C. Land, L. T. Buck, and P. W. Hochachka	R4
	Anoxia-tolerant hepatocytes: model system for study of reversible metabolic suppression L. T. Buck, S. C. Land, and P. W. Hochachka	R4
1,7	ANP inhibits NaCl absorption and elicits Cl secretion in porcine colon: evidence for cGMP and Ca mediation R. A. Argenzio and M. Armstrong	R5
1,7	DPC blockade of transepithelial chloride absorption and single anion channels in teleost urinary bladder	
	W. Chang and C. A. Loretz	R6
5,4	Effect of elevated atrial pressure on plasma renin activity in hypotensive fetal lambs A. U. Sheikh, L. K. Washburn, R. K. Jaekle, and J. C. Rose	R7
4,2,3	Raphe pallidus excites a unique class of sympathetic preganglionic neurons S. F. Morrison	R8
4,7	Endothelin-induced natriuresis and diuresis are pressure-dependent events in the rat K. Uzuner and R. O. Banks	R9
7	Effect of outflow pressure on lymphatic pumping in vitro J. Eisenhoffer, R. M. Elias, and M. G. Johnston	R9
2,7	Norepinephrine does not stimulate protein and UCP synthesis in brown adipocytes of golden Syrian hamsters M. Desautels and R. A. Dulos	R10
4,2		R11
5	Responses to catecholamines in perfused livers of hypothalamic-lesioned rats Y. Matsui, H. Ishibashi, K. Kimura, M. Shiota, M. Ohta, and T. Sugano	R11
1,4,5	Single-pass gill extraction and tissue distribution of atrial natriuretic peptide in trout K. R. Olson and D. W. Duff	R12
2,4	Effects of capsaicin on micturition and associated reflexes in rats CL. Cheng, CP. Ma, and W. C. de Groat	R13
5,7	Fate of circulating amino-terminal propeptide of type III procollagen in conscious pigs L. T. Jensen, J. H. Henriksen, J. Risteli, H. P. Olesen,	-
	M. D. Nielsen, and I. Lorenzen	R13

5,2,3	Energy balance and lipid metabolism in transgenic mice bearing an antisense GCR gene construct D. Richard, S. Chapdelaine, Y. Deshaies, MC. Pépin, and N. Barden	R146
12,5	Possible involvement of brain oxytocin in modulating vasopressin antipyretic action	
6	P. Poulin and Q. J. Pittman Metabolism and energetics in squid (Illex illecebrosus, Loligo pealei) during muscular	R151
	fatigue and recovery H. O. Pörtner, D. M. Webber, R. K. O'Dor, and R. G. Boutilier	R157
6	Acute phase response in exercise. III. Neutrophil and IL-1β accumulation in skeletal muscle R. A. Fielding, T. J. Manfredi, W. Ding, M. A. Fiatarone,	Dice
7	W. J. Evans, and J. G. Cannon Volume-regulatory amino acid transport in erythrocytes of the little skate, Raja erinacea	R166
4.5	J. K. Haynes and L. Goldstein High blood pressure maintenance in transgenic mRen-2 vs. Lyon	R173
	genetically hypertensive rats M. Lo, I. A. Medeiros, J. J. Mullins, D. Ganten, C. Barres, C. Cerutti,	R180
4,2	M. Vincent, and J. Sassard Cerebrovasodilation elicited by fastigial stimulation is preserved under deep halothane anesthesia	K160
0.45	C. Iadecola, F. Zhang, and X. Xu	R187
2,4,5	Carotid baroreflex control during hemorrhage in conscious and anesthetized dogs B. P. Geerdes, K. L. Frederick, and M. J. Brunner	R195
5,7	Hormonal, fluid, and electrolyte responses of sheep during chronic intravenous infusion of epidermal growth factor C. B. Gow, P. A. Phillips, K. D. Chandler, and G. P. M. Moore	R203
3,5,9		14200
	S. C. Weatherford, D. P. Figlewicz, C. R. Park, and S. C. Woods	R211
3,9	Integration of oral habituation and gastric signals in decerebrate rat pups S. E. Swithers-Mulvey and W. G. Hall	R216
4,2	Vasopressin, renin, and cortisol responses to hemorrhage during acute blockade of cardiac nerves in conscious dogs C. P. O'Donnell, L. C. Keil, and T. N. Thrasher	R220
2,4,12	Effects of centrally and systemically administered indomethacin on body temperature in exercising rats	11220
	H. Tanaka, M. Yanase-Fujiwara, and K. Kanosue	R230
2,9,8	K. A. Fraser and J. S. Davison	R235
5,2	Reanalysis of the rat proestrous LH surge by deconvolution analysis J. D. Veldhuis, M. L. Johnson, and R. V. Gallo	R240
2,5	Autonomic control of pancreatic polypeptide and glucagon secretion during neuroglucopenia and hypoglycemia in mice	Doug
1,5	P. J. Havel, J. O. Akpan, D. L. Curry, J. S. Stern, R. L. Gingerich, and B. Ahren Glucagon and insulin regulate lipolysis in trout liver by altering phosphorylation of triacylglycerol lipase	R246
	J. S. Harmon, L. M. Rieniets, and M. A. Sheridan	R255
5,10,3	The circadian melatonin and cortisol secretion pattern in permanent night shift workers M. Roden, M. Koller, K. Pirich, H. Vierhapper, and F. Waldhauser	R261
2. AUG	BUST 1993	
CATEGO	RY	
2,4,11	Laryngeai afferent inputs to the nucleus of the solitary tract S. W. Mifflin	R269
1,7	Inhibition of brain calcium channels by plasma proteins from anoxic turtles P. E. Bickler and S. M. Gallego	R277
7	Carrier-mediated transport of lactic acid in cultured neurons and astrocytes M. Nedergaard and S. A. Goldman	R282

No.

4,7	Effects of renal receptor stimulation on neurons within the ventrolateral medulla of the cat	
	M. A. Vizzard, A. Standish, and W. S. Ammons	R290
5	Subfornical organ efferents to paraventricular nucleus utilize angiotensin as a neurotransmitter Z. Li and A. V. Ferguson	R302
1,4,6	Influence of extent of muscle shortening and heart rate on work from frog heart trabeculae D. A. Syme	
9,3	Intragastric glucose but not fructose conditions robust flavor preferences in rats A. Sclafani, C. Cardieri, K. Tucker, D. Blusk, and K. Ackroff	R310
2	Induction of c-fos expression in spinal neurons by nociceptive and nonnociceptive stimulation of LUT L. A. Birder and W. C. de Groat	R326
5	Enhanced response of muscle protein synthesis and plasma insulin to food intake in suckled rats	
_	T. A. Davis, M. L. Fiorotto, H. V. Nguyen, and P. J. Reeds	R334
	Mechanisms of potassium transfer across the dually perfused rat placenta T. Mohammed, J. Štulc, J. D. Glazier, R. D. H. Boyd, and C. P. Sibley	R341
1,5	GABA stimulation of gonadotropin-II release in goldfish: involvement of GABA _A receptors, dopamine, and sex steroids	
10	V. L. Trudeau, B. D. Sloley, and R. E. Peter	R348
12	Impairment of insulin action on peripheral glucose uptake and hepatic glucose production in tumor-bearing rats C. H. Lang, N. Skrepnik, C. Dobrescu, and A. H. Burns	R356
2.4.5	Effect of exercise training on RSNA, baroreflex control,	Root
2,1,0	and blood pressure responsiveness C. E. Negrão, M. C. Irigoyen, E. D. Moreira, P. C. Brum, P. M. Freire, and E. M. Krieger	R365
5,9	Endogenous cholecystokinin in the control of gastric emptying of liquid nutrient loads in rhesus monkeys	
5,9	T. H. Moran, P. J. Ameglio, G. J. Schwartz, H. J. Peyton, and P. R. McHugh Experimental cachexia: effects of MCA sarcoma in the Fischer rat B. K. Smith, C. A. Conn, and M. J. Kluger	R371 R376
2	Biphasic intracellular redistribution of α_1 -adrenergic receptors in rat liver during sepsis $TL.$ Hwang, YT. Lau, MF. Chen, C. Tang, and MS. Liu	R385
2,7,4	and renal sodium reabsorption	Door
	L. D. Nelson and J. L. Osborn	R392
4,5,7	Serum immunoreactive erythropoietin and red blood cell mass during pregnancy in conscious rats	R399
1,4	G. O. Del Valle, M. D. Mosher, and K. P. Conrad Role of decreased plasma volume in hematocrit alterations during incremental treadmill	Ross
	exercise in horses K. H. McKeever, K. W. Hinchcliff, S. M. Reed, and J. T. Robertson	R404
1,4	Splenectomy alters blood pressure response to incremental treadmill exercise in horses K. H. McKeever, K. W. Hinchcliff, S. M. Reed, and R. L. Hamlin	R409
1,6	Selective retention of essential fatty acids: the role of hepatic monoacylglycerol acyltransferase T. Xia, N. Mostafa, B. G. Bhat, G. L. Florant, and R. A. Coleman	R414
9,3		
	Z. Merali and C. C. Kateb	R420
1,4,7	Vascular effects of arginine vasotocin in toad skin G. M. Malvin	R426
11	Role of μ ₁ - and δ-opioid receptors in modulation of fetal EEG and respiratory activity P. Y. Cheng, D. Wu, Y. Soong, S. McCabe, J. A. Decena, and H. H. Szeto	R433
1,7	Neuropeptide Y inhibits chloride secretion in the shark rectal gland	R439

5	Exercise, unlike insulin, promotes glucose transporter translocation in obese Zucker rat muscle P. A. King, J. J. Betts, E. D. Horton, and E. S. Horton	R447
2	Central interferon-α inhibits natural killer cytotoxicity through sympathetic innervation S. Take, T. Mori, T. Katafuchi, and T. Hori	R453
4,5,7	Vasopressin-independent alterations in renal water excretion in quadriplegia B. M. Wall, H. H. Williams, D. N. Presley, J. T. Crofton, L. Share, and C. R. Cooke	R460
3,10	Effects of long-term restricted feeding on motor activity rhythm in the rat T. Cambras, J. Vilaplana, and A. Díez-Noguera	R467
	RAPID COMMUNICATION	
1,5	High-density localization of ANP receptors in chondrocytes of eel gill cartilage H. Sakaguchi, T. Katafuchi, H. Hagiwara, Y. Takei, and S. Hirose	R474
No. 3. SEP	TEMBER 1993	
CATEGO	RY	
9,3	Cholecystokinin octapeptide analogues suppress food intake via central CCK-A receptors in mice Y. Hirosue, A. Inui, A. Teranishi, M. Miura, M. Nakajima, M. Okita,	D.O.
9.7	Y. Nakajima, N. Himori, S. Baba, and M. Kasuga Skeletal muscle Ca ²⁺ flux and catabolic response during sepsis	R481
	J. Bhattacharyya, K. D. Thompson, and M. M. Sayeed	R487
11,2	Ventilatory CO ₂ -induced optical activity changes of cat ventral medullary surface XW. Dong, D. Gozal, D. M. Rector, and R. M. Harper	R494
2,3,10	Differential timing of amino acid and 5-HIAA rhythms in suprachiasmatic hypothalamus J. D. Glass, U. E. Hauser, J. L. Blank, M. Selim, and M. A. Rea	R504
12	Role of hypothalamic interleukin-6 and tumor necrosis factor-α in LPS fever in rat J. J. Klir, J. Roth, Z. Szelényi, J. L. McClellan, and M. J. Kluger	R512
1,5	Nitric oxide and superoxide in cultured cells: limited production and influence on DNA synthesis C. Firnhaber and M. E. Murphy	R518
2,4,5	Role of V ₁ receptors in the action of vasopressin on the baroreflex control of heart rate J. Luk, I. Ajaelo, V. Wong, J. Wong, D. Chang, L. Chou, and I. A. Reid	R524
4,2,9	Nonadrenergic noncholinergic autonomic mediation of pressor response to feeding in lambs	1021
	S. A. Jones, B. L. Langille, S. Frise, and S. L. Adamson	R530
2	A comparison of inhibitory effects of neuropeptide Y on rat urinary bladder, urethra, and vas deferens	
	J. Zoubek, G. T. Somogyi, and W. C. de Groat	R537
2,7	Role of prostaglandins in renal sensory receptor activation by substance P and bradykinin U. C. Kopp and L. A. Smith	DE44
5	Insulin-mediated glycogen synthase activity in muscle of spontaneously insulin-resistant and diabetic rhesus monkeys	R544
	H. K. Ortmeyer, N. L. Bodkin, and B. C. Hansen	R552
5,6,9	in Syrian hamsters	Dero
9 8 8	G. N. Wade and J. B. Powers Energy balance in pregnant hamsters: a role for voluntary exercise?	R559
	A. J. Bhatia and G. N. Wade	R563
4	Endothelium-derived relaxing factor responses in DOCA-salt hypertensive rats K. A. Kirchner, P. H. Scanlon, Jr., D. J. Dzielak, and R. L. Hester	R568
4,5	Cardiovascular actions of dogfish urotensin II in the dogfish Scyliorhinus canicula N. Hazon, C. Bjenning, and J. M. Conlon	R573

5,6	Norepinephrine- and insulin-resistant glucose transport in brown adipocytes from diabetic SHR/N-cp rats A. Marette, P. Mauriège, JP. Després, O. L. Tulp, and L. J. Bukowiecki	R577
7,4	Atrial natriuretic factor counteracts sodium-retaining actions of insulin in normal men J. A. Miller, S. Abouchacra, B. Zinman, K. L. Skorecki, and A. G. Logan	
3,4,9	Role of arterial baroreceptor input on thirst and urinary responses to intracerebroventricular angiotensin II R. L. Thunhorst, S. J. Lewis, and A. K. Johnson	R584
2,4,7	Autonomic modulation of ovine fetal responses to atrial natriuretic factor infusion L. A. Bayer, C. Y. Cheung, and R. A. Brace	R596
2,3,9	Abdominal vagotomy dissociates the anorectic mechanisms for peripheral serotonin and cholecystokinin K. Eberle-Wang, P. Levitt, and K. J. Simansky	R602
2,5,7	Gastric vagus mediates immobilization-induced hypocalcemia in rats J. Ma, S. Aou, H. Matsui, and T. Hori	R609
12	Anti-TNF- α antibodies normalized body temperature and enhanced food intake in tumor-bearing rats	
9,3	B. K. Smith and M. J. Kluger Blockade of type A, but not type B, CCK receptors postpones satiety in rhesus monkeys T. H. Moran, P. J. Ameglio, H. J. Peyton, G. J. Schwartz, and P. R. McHugh	R615
4,2	Cardiovascular consequences of microinjection of vasopressin and angiotensin II in the area postrema	
1,5	V. L. Lowes, L. E. McLean, N. W. Kasting, and A. V. Ferguson Plasma catecholamine and corticosterone and their in vitro effects on lizard skeletal muscle lactate metabolism	R625
5,3	T. T. Gleeson, P. M. Dalessio, J. A. Carr, S. J. Wickler, and R. S. Mazzeo Increased uteroplacental production of prostaglandin E ₂ during ethanol infusion A. D. Bocking, K. R. Sinervo, G. N. Smith, L. Carmichael, J. R. G. Challis, D. M. Olson, and J. F. Brien.	R632
,11,12	D. M. Olson, and J. F. Brien Antioxidant defenses in the tolerance of freezing and anoxia by garter snakes M. Hermes-Lima and K. B. Storey	R640 R646
2,12	Kinetics of systemic and intrahypothalamic IL-6 and tumor necrosis factor during endotoxin fever in guinea pigs J. Roth, C. A. Conn, M. J. Kluger, and E. Zeisberger	R653
4,2	Modulation of in situ canine intrinsic cardiac neuronal activity by nicotinic, muscarinic, and β -adrenergic agonists	1000
7	M. H. Huang, F. M. Smith, and J. A. Armour Asymmetrical transfer of inert hydrophilic solutes across rat placenta	R659
	J. Štulc and B. Štulcova Postnatal development of uncoupling protein, uncoupling protein mRNA, and GLUT4 in adipose tissues of goats	R670
	P. Trayhurn, M. E. A. Thomas, and J. S. Keith	R676
6,2	Involvement of central vs. peripheral mechanisms in mediating sympathoadrenal activation in endotoxic rats Z. Z. Zhou and S. B. Jones	R683
12,5,7	α_2 -Adrenoceptor antagonism attenuates the diuretic response to acute cold exposure D. E. Allen and M. Gellai	R689
7	Brain lactate and pH dissociation in edema: ¹ H- and ³¹ P-NMR in collagenase-induced hemorrhage in rats S. Mun-Bryce, F. O. Kroh, J. White, and G. A. Rosenberg	R697
7,2		R703

1,3,10 A quantitative method for classification of EEG in the fetal baboon M. M. Myers, R. I. Stark, W. P. Fifer, P. G. Grieve, J. Haiken, K. Leung, and K. F. Schulze

R706

INVITED REVIEW

1,4	The heart works against gravity R. S. Seymour, A. R. Hargens, and T. J. Pedley	R715
1,12	Physiological responses of freeze-tolerant and -intolerant frogs: clues to evolution of anuran freeze tolerance	
4,5,8	J. P. Costanzo, R. E. Lee, Jr., and P. H. Lortz Pioglitazone attenuates hypertension and inhibits growth of renal arteriolar smooth muscle in rats	R721
2	R. K. Dubey, H. Y. Zhang, S. R. Reddy, M. A. Boegehold, and T. A. Kotchen Reflex vasodilatation in the cat lip elicited by stimulation of nasal mucosa by chemical irritants	R726
5	H. Izumi and K. Karita Modulation of systemic interleukin-6 induction by central interleukin-1	R733
2	M. G. De Simoni, A. De Luigi, L. Gemma, M. Sironi, A. Manfridi, and P. Ghezzi Control of bilateral seminal emissions from ejaculatory ducts	R739
	by a lumbar splanchnic nerve K. Kihara, K. Sato, M. Ando, T. Morita, and H. Oshima	R743
1,10	Development of meadow voles is influenced postnatally by maternal photoperiodic history T. M. Lee	R749
2,5	Plasma epinephrine appearance and clearance rates in fetal and newborn sheep H. Stein, K. Oyama, A. Martinez, B. Chappell, and J. Padbury	R756
1,6	Plasma β -hydroxybutyrate after octanoate challenge: attenuated ketogenic capacity in neonatal swine S. H. Adams and J. Odle	R761
2,4,5	In vivo evidence for adrenal catecholamine release mediated by nonnicotinic mechanism: local medullary effect of VIP N. Yamaguchi	R766
1,4	The effect of pregnancy on the response to the TxA ₂ /PGH ₂ analogue U-46619 in rabbits G. Losonczy, I. Mucha, J. DiPirro, J. Sweeney, G. Brown,	R772
12,10,6	J. Brentjens, and R. Venuto Circadian rhythms of thermoregulation in the squirrel monkey (Saimiri sciureus)	R781
5	E. L. Robinson, V. H. Demaria-Pesce, and C. A. Fuller Determinants of fasting hypertriglyceridemia in ventromedial hypothalamic obesity in rats	Kioi
9.4	S. Inoue, S. Satoh, K. Tanaka, Y. Takamura, and T. Murase Effects of anesthesia on cardiac and renal sympathetic nerve activities	R786
2,4	and plasma catecholamines K. Matsukawa, I. Ninomiya, and N. Nishiura	R792
4,2	Decreased potency of contraction to α -adrenoceptor stimulation in renal arteries from obese hypertensive dogs	
1,2	P. H. Ratz, D. B. West, and J. P. Granger Primary structures and effects on gastrointestinal motility of tachykinins	R798
	from the rainbow trout J. Jensen, K. R. Olson, and J. M. Conlon	R804
11,4,2	Time-dependent phrenic nerve responses to carotid afferent activation: intact vs. decerebellate rats F. Hayashi, S. K. Coles, K. B. Bach, G. S. Mitchell, and D. R. McCrimmon	R811
5,7		R820
4,7,5	Blood pressure effects of iontophoretically applied bioactive hormones in the anterior forebrain of the rat	
	S. N. Thornton and S. Nicolaidis	R826

2,4,5	Effect of a central CRF antagonist on cardiovascular and thermoregulatory responses induced by stress or IL-1β	Dona
5	T. Nakamori, A. Morimoto, and N. Murakami Hypothalamic peptide regulation of ACTH secretion from sheep pituitary	R834
1,5,10	R. J. Kemppainen, T. P. Clark, J. L. Sartin, and C. A. Zerbe Conservation of photoperiod-responsive mechanisms in humans T. A. Wehr, D. E. Moul, G. Barbato, H. A. Giesen, J. A. Seidel, C. Barker, and C. Bender	R840
4,5	Fetal ACTH and blood pressure responses to thromboxane mimetic U-46619 C. E. Wood, T. A. Cudd, C. Kane, and K. Engelke	R858
1,5,11	Augmented glucoregulatory hormone concentrations during exhausting exercise in mildly iron-deficient rats	
9,2,3	B. A. Zinker, P. R. Dallman, and G. A. Brooks Gastric loads and cholecystokinin synergistically stimulate rat gastric vagal afferents G. J. Schwartz, P. R. McHugh, and T. H. Moran	R863
3,5,9	Interleukin-8 modulates feeding by direct action in the central nervous system C. R. Plata-Salamán and J. P. Borkoski	R877
2,4,5	Unaltered cerebral blood flow during hypoglycemic activation of the sympathochromaffin system in humans	R883
9,3	W. J. Powers, P. J. Boyle, I. B. Hirsch, and P. E. Cryer Postpyloric stimuli are necessary for the normal control of meal size in real feeding and sham feeding rats	
2,5,9	J. D. Davis, G. P. Smith, and J. Miesner Differential effects of proteinase inhibitor camostat on exocrine pancreas in fed and fasted rats	R888
4,7	M. Otsuki, S. Tani, M. Fujii, T. Nakamura, Y. Okabayashi, and M. Koide Renal response to atrial stretch during pregnancy in conscious rats	R896
3,12	S. Kaufman and Y. Deng An IL-1 receptor and an IL-1 receptor antagonist attenuate muramyl dipeptide- and IL-1-induced sleep and fever	R902
2.4	L. Imeri, M. R. Opp, and J. M. Krueger Modulation of in situ canine intrinsic cardiac neuronal activity by locally applied	R907
-,-	adenosine, ATP, or analogues M. H. Huang, C. Sylvén, A. Pelleg, F. M. Smith, and J. A. Armour	R914
2,4,5	K. P. Patel, P. L. Zhang, and T. L. Krukoff	R923
1,6	C. J. Doll, P. W. Hochachka, and P. B. Reiner	R929
4,5,7	Arginine vasopressin produces renal vasodilation via V ₂ receptors in conscious dogs M. Naitoh, H. Suzuki, M. Murakami, A. Matsumoto, A. Ichihara, H. Nakamoto, Y. Yamamura, and T. Saruta	R934
7,4,1	Impairment of renal function precedes establishment of hypertension in spontaneously hypertensive rats C. F. T. Uyehara and M. Gellai	R943
3,10,12		R951
	SPECIAL COMMUNICATION	
2,8,12	Genetic development of an inbred rat strain with increased resistance adaptation to a hot environment F. Furuyama and K. Ohara	R957

No. 5. NOVEMBER 1993

CATEGORY

INVITED REVIEW

7,4 Influence of the renal medullary circulation on the control of sodium excretion R. J. Roman and A.-P. Zou

1,2	Effect of superhypercapnia on cortical pH ₁ and cortical blood flow F. H. Tomlinson, R. E. Anderson, and F. B. Meyer	R974
1,5		
	M. C. Lawrence, R. E. H. Wettenhall, A. R. Aldred, and G. Schreiber	R982
2,7,8	Volume-activated K ⁺ and Cl ⁻ pathways of dissociated eccrine clear cells G. Samman, M. Ohtsuyama, F. Sato, and K. Sato	R990
9	Characterization of suppression of food intake following acute colon inflammation in the rat	
	K. McHugh, T. W. Castonguay, S. M. Collins, and H. P. Weingarten	R1001
2,4,10	Lateral tegmental field neurons play a permissive role in governing the 10-Hz rhythm in sympathetic nerve discharge S. M. Barman and G. L. Gebber	R1006
1,11	Microcalorimetric measurement of reversible metabolic suppression induced by anoxia in isolated hepatocytes L. T. Buck, P. W. Hochachka, A. Schön, and E. Gnaiger	R1014
		K1014
1,11	Anoxic suppression of Na*-K*-ATPase and constant membrane potential in hepatocytes: support for channel arrest L. T. Buck and P. W. Hochachka	R1020
2,4,10	Role of the brain stem in generating the 2- to 6-Hz oscillation	
	in sympathetic nerve discharge	
	S. Zhong, ZS. Huang, G. L. Gebber, and S. M. Barman	R1026
6,7,12	Adaptations of plasma membrane glucose transport facilitate cryoprotectant distribution in freeze-tolerant frogs	
	P. A. King, M. N. Rosholt, and K. B. Storey	R1036
3,7,9	Endotoxin stimulates drinking in rats without changing dehydrational	
	signals controlling thirst K. Wang and M. D. Evered	R1043
2,4	Role of periaqueductal gray in the pressor response produced by central injections of angiotensin II	
2,3,12	L. R. Portis, S. J. Lewis, and M. J. Brody Cold-defense function of brown adipose tissue during sleep	R1052
	M. Calasso, E. Zantedeschi, and P. L. Parmeggiani	R1060
2,4	α ₂ -Adrenoceptor-mediated inhibition of bulbospinal barosensitive cells of rat rostral medulla A. M. Allen and P. G. Guyenet	R1065
1.5.6	Skeletal muscle as the major site of nonshivering thermogenesis	111000
2,0,0	in cold-acclimated ducklings C. Duchamp and H. Barré	R1076
1,5,6	Increased role of skeletal muscle in the calorigenic response to glucagon	
	of cold-acclimated ducklings	
	C. Duchamp, J. Chatonnet, A. Dittmar, and H. Barré	R1084
2,9	Plasticity of autonomic control of emesis in irradiated ferrets M. T. Makale and G. L. King	R1092
1,5,7	Current-noise analysis of Na absorption in the embryonic coprodeum: stimulation by aldosterone and thyroxine	111002
	W. Clauss, B. Hoffmann, R. Krattenmacher, and W. Van Driessche	R1100
5,12	Alterations in body fat stores and plasma insulin levels with daily intervals of heat exposure in Holtzman rats	
	C. J. De Souza and A. H. Meier	R1109
5,12	Daily intervals of heat exposure alter the phase of the daily variation of plasma hormones in Holtzman rats C. J. De Souza and A. H. Meier	R1115
19	Role of prostaglandins in exercise-induced core temperature elevation	11110
	in female Sprague-Dawley rats P. J. Rowsey, K. T. Borer, and M. J. Kluger	R1121
4,7	Role of endothelium-derived nitric oxide in control of renal microvasculature	
	in aging male rats J. F. Reckelhoff and R. D. Manning, Jr.	R1126

4,2	with pacing-induced heart failure	
1,6	N. B. Olivier and R. B. Stephenson Glucosidic pathways of glycogen breakdown and glucose production by muscle	R1132
	from postexercised frogs	D1141
2.6.12	P. A. Fournier and H. Guderley Sustained sleep deprivation impairs host defense	R1141
2,0,12	C. A. Everson	R1148
2,4,5	Mechanisms underlying cardiovascular defense reaction evoked by dorsal periaqueductal gray stimulation L. Watkins, A. Sherwood, D. S. Goldstein, and W. Maixner	R1155
1,12,6	Effects of temperature on muscle pH _i and phosphate metabolites in newts and lungless salamanders D. C. Johnson, C. T. Burt, WC. Perng, and B. M. Hitzig	R1162
9,3,2	Lateral parabrachial subnucleus lesions abolish feeding induced by mercaptoacetate but not by 2-deoxy-p-glucose	
1.5.12	N. Y. Calingasan and S. Ritter Fever and thermogenesis in response to bacterial endotoxin involve	R1168
1,0,12	macrophage-dependent mechanisms in rats	
	R. H. DeRijk, P. J. L. M. Strijbos, N. van Rooijen, N. J. Rothwell, and F. Berkenbosch	R1179
4,1,2	Central cardiovascular effects of joining peptide in genetically hypertensive rats T. Hamakubo, M. Yoshida, K. Nakajima, T. X. Watanabe,	
1010	R. Mosqueda-Garcia, and T. Inagami	R1184
1,3,10	Local administration of EAA antagonists blocks light-induced phase shifts and c-fos expression in hamster SCN	
	M. A. Rea, B. Buckley, and L. M. Lutton	R1191
5	Effect of somatostatin on circadian rhythms of firing and 2-deoxyglucose uptake in rat suprachiasmatic slices T. Hamada, S. Shibata, A. Tsuneyoshi, K. Tominaga, and S. Watanabe	R1199
	SPECIAL COMMUNICATION	_
2,3	Modified microdialysis probe for sampling extracellular fluid and administering drugs in vivo G. Yadid, K. Pacak, I. J. Kopin, and D. S. Goldstein	R1205
	G. Tudia, A. Tudan, I. S. Ropin, and D. S. Goldstein	141200
	RAPID COMMUNICATIONS	
7,3,4	in the brain	R1212
3.10.12	W. K. Samson and T. C. Murphy Do the suprachiasmatic nuclei oscillate in old rats as they do in young ones?	K1212
0,10,12	E. Satinoff, H. Li, T. K. Tcheng, C. Liu, A. J. McArthur, M. Medanic, and M. U. Gillette	R1216
No. 6. DEC	EMBER 1993	
CATEGO	RY	
	Oral sensory stimulation in men: effects on insulin, C-peptide, and catecholamines K. L. Teff, B. E. Levin, and K. Engelman	R1223
2,6,9	Pancreatic glucagon suppresses gustatory responsiveness to glucose B. K. Giza, R. O. Deems, D. A. Vanderweele, and T. R. Scott	R1231
1,6,11	Regulatory features of protein synthesis in isolated mitochondria from Artemia embryos K. E. Kwast and S. C. Hand	R1238
5,7	Impairment of osmotically stimulated AVP release in patients with primary polydipsia A. M. Moses and B. Clayton	R1247
2,5	Basic fibroblast growth factor may mediate proliferation in the compensatory adrenal growth response	R1253
	II to Manua and M. A. Molamawa	F4 1 7 7 4

3,4,5	hyperglycemic fetal lamb T. S. Rosenkrantz, I. Knox, E. L. Zalneraitis, J. R. Raye, P. J. Porte, R. Cramer,	
2.4	R. Smoloski, and A. F. Philipps Total autonomic blockade eliminates the attenuated pressor response to angiotensin II	R1262
-,-	in pregnant rats T. Hines, M. D. Lindheimer, and W. M. Barron	R1270
4,5	Angiotensin II: nitric oxide interaction and the distribution of blood flow D. H. Sigmon and W. H. Beierwaltes	R1276
5,7	Sex difference in the antidiuretic activity of vasopressin in the rat YX. Wang, R. M. Edwards, P. Nambi, E. J. Stack, M. Pullen, L. Share, J. T. Crofton, and D. P. Brooks	R1284
1,2	Tonic descending modulation of spinal neuronal responses to activation of renal receptors A. Standish, M. A. Vizzard, and W. S. Ammons	R1291
3,5	Psychoneuroendocrine profile associated with hypertension or hyperactivity in spontaneously hypertensive rats N. Castanon, E. D. Hendley, XM. Fan, and P. Mormède	R1304
4,2	Coronary vasoconstrictor pathway from anterior hypothalamus includes neurons in RVLM	R1311
4,7	A. R. Goodson, T. S. LaMaster, and D. D. Gutterman Effect of plasma osmolality on steady-state fluid shifts in perfused cat skeletal muscle M. T. Hamilton, D. S. Ward, and P. D. Watson	R1318
12,7,1	Dehydration tolerance in wood frogs: a new perspective on development of amphibian freeze tolerance T. A. Churchill and K. B. Storey	R1324
2,5,6		R1333
1,11,12	Interaction between temperature and hypoxia in the alligator L. G. S. Branco, H. O. Pörtner, and S. C. Wood	R1339
6	Acute exercise and skeletal muscle antioxidant and metabolic enzymes: effects of fiber type and age J. M. Lawler, S. K. Powers, T. Visser, H. Van Dijk, M. J. Kordus, and L. L. Ji	R1344
12		R1351
2,4,11	NTS neuronal responses to arterial pressure and pressure changes in the rat R. F. Rogers, J. F. R. Paton, and J. S. Schwaber	R1355
2,12		R1369
2,5,7	The stomach is the etiologic organ for immobilization-induced hypocalcemia in rats S. Aou, J. Ma, K. Shiramine, and T. Hori	R1376
1,11	De novo protein synthesis and protein phosphorylation during anoxia and recovery in the red-eared turtle S. P. J. Brooks and K. B. Storey	R1380
5,6,9	Parenteral nutrition, brain glycogen, and food intake M. M. Meguid, J. L. Beverly, ZJ. Yang, J. R. Gleason, R. A. Meguid, and MX. Yue	R1387
3,5,9	ICI 182,780: a pure antiestrogen that affects behaviors and energy balance in rats without acting in the brain G. N. Wade, J. D. Blaustein, J. M. Gray, and J. M. Meredith	R1392
3,5,9		
9.3	G. N. Wade, J. B. Powers, J. D. Blaustein, and D. E. Green Role of olfaction in starch and oil preference	R1399
0,0	I. Ramirez	R1404

Role of NO in goat basal cerebral circulation and after vasodilatation to hypercapnia or brief ischemias G. Diéguez, J. L. Garcia, N. Fernández, A. L. García-Villalón, L. Monge, and B. Gómez R1410 4,7 Biological actions of brain natriuretic peptide in thoracic inferior vena caval constriction A. L. Clavell, A. J. Stingo, L. L. Aarhus, and J. C. Burnett, Jr. R1416 9,3,2 Meal initiation occurs after experimental induction of transient declines in blood glucose F. J. Smith and L. A. Campfield R1423 1,4 Adaptations of myocardial β-adrenergic receptor complex in hibernating marmots S. A. Morris, G. Florant, M. Saxon, G. Chen, and J. P. Bilezikian R1430 12,11,10 Synchrony between breathing and shivering in three muscles of bantam hens exposed to cold eggs Ø. Toien R1439 1,12 Hyperthermia protects mice against the lethal effects of endotoxin R. Hotchkiss, I. Nunnally, S. Lindquist, J. Taulien, G. Perdrizet, and I. Karl R1447 2,3,4 Integrating behavior and cardiovascular responses: posture and locomotion. O. A. Smith, C. A. Astley, F. A. Spelman, E. V. Golanov, V. G. Chalyan, D. M. Bowden, and D. J. Taylor R1458 7,5 Role of prostaglandins on the renal effects of angiotensin and interstitial pressure during volume expansion J. M. Pinilla, A. Alberola, J. D. González, T. Quesada, and F. J. Salazar R1469 RAPID COMMUNICATIONS 7,5 Steady-state osmotic modulation of cationic conductance in neurons of rat supraoptic nucleus S. H. R. Oliet and C. W. Bourque R1475 3,7,9 Latent learning about calcium and sodium S. E. Coldwell and M. G. Tordoff R1480 Subject Index to Volume 34 R1485 Author Index to Volume 34

CORRIGENDA

Volume 264, June 1993 Volume 33, June 1993

Pages R1065-R1070: D. M. Surina, W. Langhans, R. Pauli, and C. Wenk. "Meal composition affects postprandial fatty acid oxidation." Results from a similar experiment performed after this article went to press have led the authors to conclude that the β -hydroxybutyrate values reported in this article are unreliable. They are probably skewed by high plasma triglyceride levels. The authors deeply regret this error and request that the readers disregard the related interpretations.

R1497

Volume 265, July 1993 Volume 34, July 1993

Pages R240-R245: J. D. Veldhuis, M. L. Johnson, and R. V. Gallo. "Reanalysis of the rat proestrous LH surge by deconvolution analysis." Page R244: Reference 7 was inadvertently dropped from the reference list by the printer. It should read:

> 7. Gallo, R. V. Pulsatile LH release during periods of low level LH secretion in the rat estrous cycle. Biol. Reprod. 24: 771-777, 1981.